TIC

VACATION ENDS — SCHOOL BEGINS

Vol. XII No. 8
25 Cents

Vacation Daze

Dear Doctor,

The two disconsolate gentlemen on this months' cover have just finished their vacations!

Both are faced with the stark reality of going back to the daily grind. Yet, in spite of their unhappy expressions, they have had a wonderful vacation.

We hope you are taking (or have taken) a vacation this year. It doesn't matter much whether you fish, swim, play golf—or just plain sit. The important thing is to break the continual pressure of your daily routine.

Incidentally, our laboratory can offer you a year 'round vacation from your prosthetic problems. Why not give us a call on your next case.

Very truly yours,

[redacted]

P. S. Relax and read this issue of TIC right now!

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The Controversial Finger-Sucking Habit

by Theodore Katz, D.D.S and Harold Gluck, Ph.D.
Part I

The usual fairy tale begins, "Once upon a time there was a physician, dentist, orthodontist, pediatrician, psychologist, nurse, confused parents, and a frustrated finger-sucking youngster."

Mrs. Henderson was a worried mother as she came into the office with her five-year-old Geraldine and explained: "She has the sucking habit with her thumb and it drives me crazy. In addition, she gets a hold on her nose at the same time. Nothing I can do will stop her. I tried spanking and other punishments, but to no avail. Then I offered her rewards. But she still sucks that thumb. I know she will disfigure her face, injure her nose, and her second teeth will come out crooked! But what can I do?"

At the other extreme was Mrs. Pratt. We met her during our summer vacation, and she had a four-year-old daughter, Paula, whose one ambition in life, it seemed, was to turn her thumb into a lollipop. Mother didn't pay any attention to it. She informed us that, according to the latest scientific research, she was convinced that thumb sucking at that age wasn't very serious. She added: "It soothes Paula when she is upset and hence serves a psychological function. Since it is merely a continuation of something basic in human nature, it must follow that no injury can be produced to the teeth or the jaw."

An orthodontist told us once: "I used every chemical and mechanical trick to break my first daughter of the thumb-sucking habit. I succeeded, but she is a very nervous child now. I am leaving my second daughter alone with her thumb-sucking habit. Later, if she develops a malocclusion, I will straighten her teeth."

A Critique on Finger-Sucking

Just what do we really know about the causes and effects of thumb-sucking? There is disagreement over certain phases of it—and we'll never forget Mrs. Pringle. Her father was a pediatrician and her father-in-law was a dentist. They disagreed violently over the possible bad effects of her five-year-old son who enjoyed sucking his thumb and stroking anything woolly at the same time. The problem is controversial, so let us start with an

understanding based on a critique of finger-sucking and accessory movements.

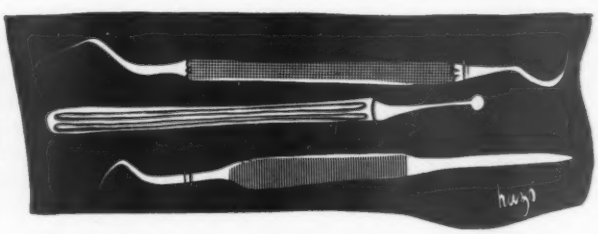
INNATE: Sucking—

(a) One of the reflexes with which a child is born. The newly born child will suck vigorously on almost any object that comes in contact with his lips. It is normal and desirable. For, without it, he would be unable to take food and survive.

(b) Manifestation of infant sexuality. Lip and tongue are erogenous zones.

ASSOCIATED WITH FEEDING: In absence of bottle or breast, the infant likes to put things in mouth and subsequently discovers fingers. The use of the pacifier, hurried feeding so that the sucking reflex is not satisfied, undernourished, hunger, deficient appetite, sudden weaning, disturbance of feeding routine, and irritations due to teething in the child—are all factors to be considered.

PSYCHOLOGICAL: Overwhelmed by surroundings or a tired feeling and tension relieved by sucking. In a high strung or emotional child where we find frustration, we may also find thumb-sucking as an emotional relief. The child deprived of parental affection may turn to it. The lack of suitable toys may cause the child to play with the thumb. In the advent of another child, without suitable preparation, as a protest and relief, the older child may turn to thumb-sucking. The child intensely absorbed in watching movies or T.V. may do it. After punishments and scoldings, as a relief. And the bored child or the one who wants excitement may turn to thumb-sucking.



PHYSIOLOGICAL: Some allergists believe that finger-sucking arises in connection with respiratory difficulty; that a nasal obstruction or an allergy or combination of the two may be partially relieved through pressure on the anterior portion of the palate. Perhaps the vacuum created by the thumb-sucking also relieves pressure on congested membranes in allergy cases.

ACCESSORY OR ASSOCIATION HABITS: (With our thanks to Doctor David Levy). In the case of thumb-sucking and in other forms of sucking habits there is often a movement of the other hand that accompanies the sucking act. The movement has been called an accessory movement and has been traced to movements that were made by the free hand while at the breast or bottle. Such movements may become so integrated with the pattern of the sucking act that the sucking act can continue without them. Thus we see accompanied with finger-sucking, the feeling of hair, skin, woolen or silk blanket; picking nose; scratching or twisting hair; hair stroking; pinching skin, or rubbing the genitals.

Doctor F. L. Adams has ably pointed out that: "Growth and development of the oral tissues and structures follow an orderly pattern—or should—in attaining the form and size which nature has intended. *Any pressure, therefore, which is continued over a long time may inhibit the natural growth and development or may cause a distortion of the configuration which would otherwise develop.*" (Italics ours.)[1] Holding of the thumb or any finger in the mouth and between the teeth exerts a pressure and does cause the teeth to be held farther apart than in the normal rest position.

A study by Doctor Dennis Bliss concluded: "Obviously the thumb was not meant to be sucked, but the obscure emotion upsets which lead a child to find consolation in the erotic habit of thumb-sucking are difficult to fathom. The habit, however, is prevalent. From an observation of three hundred patients between the ages of two and four years, seventeen per cent were found to be acknowledged thumb-suckers. Psychologists seem wrong in pronouncing thumb-sucking as harmless. Thumb-sucking is a symptom of a variety of disturbances, and it is futile to tackle the habit alone without first discovering the cause."[2]

Three Groups

The study classifies the causes of thumb-sucking into three groups: irritation, frustration, and association. But the important point in this study is that a large proportion of those children had a malocclusion, either caused or aggravated by the habit. Suppose we word this in a way so as to be able to give a mother a definite answer: We do have material on hand which shows definitely that in a group of children who were chronic thumb-suckers, something was wrong with the way their teeth met when the mouths were closed.

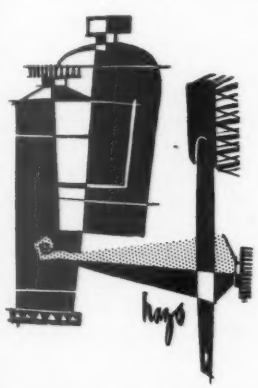
A Mother's Question Answered

Mother may retort with a certain amount of logic in her answer, "I am a bit puzzled. It seems to me that thumb-sucking affects some children and not others. For example, my cousin Joe and my

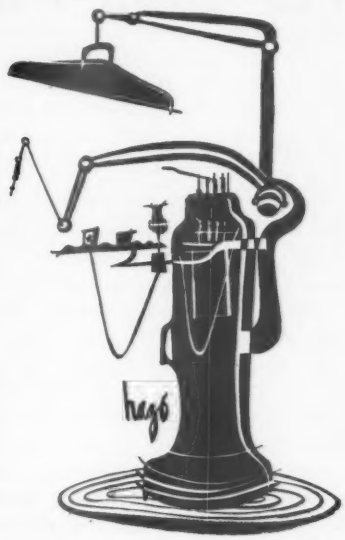
sister Kate; both were thumb-suckers. Joe has a good set of teeth, but Kate had to go to an orthodontist. What makes the difference?"

Doctor Allan G. Brodie has called attention to the fact that "Living bone is not the hard, unyielding material that we are accustomed to see in the museum specimens." He adds: "To the contrary, it is probably the most easily molded tissue in the body, reacting easily to forces to which it is subjected. Furthermore, it is no stronger than it needs to be to perform the duties for which it was designed. . . . . It should not be inferred from this that all thumb-sucking will cause protrusion of the teeth. A number of facts will determine whether a deformity will result. First, there is the same variation between individuals in regard to susceptibility as is found in other bodily conditions. In other words, some children who are ardent and persistent thumb-suckers will appear to show very little or no effect of the habit, while others who indulge the habit rather lightly will be greatly deformed. Another determining fact is the amount of time that the habit is active. If a child puts the thumb in its mouth for a few minutes just as it falls asleep, or upon awakening, there is a small chance that any damage will be done. If it is more persistent than this, there is danger. From these statements it should be apparent that the best procedure is to break the habit as early as possible or, better still, never let it get started."[3]

A word of caution about breaking the thumb-sucking habit. We suggest to those men who desire to take the stern, unyielding stand that the habit must be broken at any cost, that they analyze the cigarette-smoking habit of adults. How often do we meet grown-ups who have tried desperately to break themselves of the habit, yet have failed time and time again. So please look with a more lenient eye at the child with the thumb-sucking habit who seems to resist the best efforts to break that habit.



This does give the mother the answer to what has been puzzling her when she recalls that one child showed no effect of thumb-sucking and another did. The extent of the damage of thumb-sucking has been shown by Doctor D. D. Cleek to line up as follows: "Oral deformities caused by thumb-sucking are most times of a typical character



associated with forward placement of the upper front teeth and at times also a retrusion of the lower incisor teeth. Forward displacement of the upper teeth is most noticeable or severe on the side where the thumb is sucked most."[4]

(Part Two—Next Month)

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NOTE TO MY DENTIST

Reserve for me your burrs and drill,
I will not switch to chlorophyll!
Since I won't keep right up-to-date,
But leave my teeth to their sad fate,
A soda jerk I well may be –
I use Na HCO_3

Barbara Becker

Financially Speaking,

SHOULD YOUR WIFE WORK IN YOUR OFFICE?

by Harold J. Ashe

In a substantial number of cases, wives of dentists are gainfully employed in the practice as dental assistants. A good many wives quite laudably contribute their services to help cut down office overhead costs and thus increase professional earnings.

Employment of a wife in a dentist's office may be a temporary expedient which becomes a permanent arrangement. A wife may originally take on such office duties as a means of helping her husband during the first critical months or years while he is struggling to build up a profitable practice, and with limited resources.

Nevertheless, all too often there is a wide gap separating the financial expectations of the wife who works in her husband's dental office and the realities of her contribution to the *net* take-home return from the practice.

"I don't know what Jim would do if I didn't work in the office," said the wife of one dentist. She, like many another dentist's wife, considers the salary she saves her husband's practice is just so much velvet added to the family income available from that practice. She would probably be shocked to learn just how little her office services contribute to the financial well-being of her home and family. And, because she earnestly desires to be of help to her husband, she may even resent having this pointed out to her.

When a wife works in her husband's office, both the dentist and his wife are predisposed to assume erroneously that the net gain by such a working partnership is represented by the full salary saved in the wife displacing a salaried dental assistant, whether it be as little as $1,200 or as much as $3,000 a year or more. Nothing could be farther from the facts of such employment. The sad truth of the matter is that precisely the factors which seem to make a wife's employment in the office imperative conspire to dissipate largely her efforts. And she is defrauded of a large share of the fruits of her sacrifices.

Expenses at Home Rise

The absence of a dentist's wife from home during office hours usually results in sharply increased household and personal bills. The same tax rates which play havoc with her husband's net earnings without her services attack her contribution to the practice as well. The direct cost of working makes further inroads into the theoretical savings she effects for the practice by giving her services.

Even under ideal conditions, the wife of a dentist may not be able to retain for family needs and savings more than fifty or sixty per cent of the value of her services to the practice. In extreme cases, eight hours of work as a dental assistant may result in only a negligible net gain.

"Even though I've gone back to work in the office, we don't seem to be any better off than before," bemoaned the wife of one dentist. This writer sat down with her and her husband and did some quick figuring. The result: Irrefutable evidence the wife's net contribution to the family income was less than $7 a week! This although she had reduced her husband's payroll by $50 a week by replacing a salaried dental assistant. And this, in turn, increased the net income of the practice by a like amount.

While all levies due to her office employment could not be traced with exactness, there was considerable reason to suspect that even this paltry $7 was not really available for normal family needs. This dentist and his wife had materially increased the net earnings of the practice without, however, bettering themselves financially. They had only the dubious distinction of reporting a larger net income in tax returns which, however, resulted in no net gain.

A half hour's frank discussion revealed the following circumstances surrounding the wife's employment in her husband's office: (1) A housekeeper was employed to care for the home and two small children. (2) The housekeeper was a poor manager and bills increased sharply over those formerly incurred under the wife's direct management. (3) In addition to the housekeeper's wages was the expense of boarding her. (4) On the housekeeper's day off, the family dined out at considerable additional expense, to spare the wife extra home work. (5) The wife's employment resulted in some additional expenses traceable directly to that fact. (6) Every dollar of additional net income created by the wife's services was subject to income tax.

Another Case Illustration

To illustrate how the gross value of a wife's services are whittled down, let us consider a less extreme case. This dentist's wife has no children.

She tries to do most of her own housework. However, she does have a woman come in once a week to do the heavier cleaning. All breakfasts and dinners are at home because this wife is determined that her value to the practice and her contribution to the family income shall not be dissipated in substituting her services in the home. Yet, despite her vigilance and sacrifices, she cannot escape certain consequences of employment in her husband's office. Here are the facts:

Gross monthly salary		$200.00
Expenses traceable to or increased by reason of wife being gainfully employed in office:		
Weekly cleaning woman	$34.67	
Extra lunch expense and carfare	15.60	
Miscellaneous job expenses	4.33	
Income tax	40.50	
Total expenses		95.10
Net gain traceable to office employment		$104.90

The foregoing example presupposes that the wife's salary savings available to the practice, plus the other net income from the practice, will not exceed the lowest income tax bracket (about $5,775). If, however, the wife's salary savings for the practice throw the professional earnings into a higher tax bracket, the net salary saving will be even less.

The Impact of Taxes

A fact often overlooked in connection with a wife working in her husband's dental office is this: The additional net profit accruing to the practice as a result of such services is wholly subject to income taxation. The personal cost, however, to the dentist and his wife of making the wife's personal services available to the practice is not tax deductible. For example, on the same day the couple sustain a personal expense of, perhaps, $8 for a cleaning woman, the dentist's wife may add as little as $6 or $7 (depending on the going salary value of her services) to the net earnings of the practice. This does not even offset the cost of substituting her services in the home that day. And, in addition, this gain for the practice carries an income tax assessment of about $1.20 to $1.40 in the lowest tax bracket. And more if net earnings are above the lowest tax bracket.

Moreover, and in practice over a long period of time, the personal expense items incident to a wife's employment in her husband's office tend to rise. This further reduces the real value of her services. Starting out bravely to carry a double load both at home and in the office, the treadmill of drudgery gradually breaks down the wife's resolution to do a maximum amount of home work. Little by little, more household services are farmed out to commercial companies and individuals. This may reach a point where her salary contribution to the practice merely becomes an offset, if even that, to the loss sustained and the additional expenses incurred by reason of her absence from the home. Yet she still must carry many of the burdens and responsibilities of a homemaker in fact.

It is not to be implied the writer is supporting any such notion as that a "wife's place is in the home." Whether a dentist's wife elects to be gainfully employed as her husband's dental assistant is a personal matter and one which only she and her husband can intelligently decide. A good many wives prefer to work outside the home, and without considering the financial aspect of such an arrangement. They are happier in so doing.

But, if economic circumstances are the primary consideration in whether a wife will be her husband's dental assistant, it may be profitable to analyze the amount of additional net income which will actually be available to the marital and office partnership by such an arrangement. Each case must be determined upon the basis of the facts surrounding it. Under favorable circumstances, a wife's net contribution by working in the office may be as much as seventy or eighty per cent of the salary saving effected. In other instances, the net contribution may be as little as ten or twenty per cent.

Three black-and-white drawings all on the same theme, "Dance of the Forceps," are hung at the art show that was a sidelight of the 61st Dentist Convention in Paris recently. These were the work of French dentist D. Solo, of Choisy le Roy, near Paris. All drawings and paintings in the exhibition were done by dentists.

Wide World Photo

Dental Wives:

Summer Replacement

by Kay Lipke

It was midsummer, and hot. The weather was ideal for long days at the seashore, or fishing in a cool mountain stream.

However, no one even mentioned a vacation, for the dentist was ill with virus pneumonia, an ice bag on his head and a thermometer in his mouth. Brownie, his office nurse, remained loyally on the job during the day, and came out to the house in the evening to help in any way she could.

Then, as suddenly as he had been taken ill, the dentist began to get well, and reached a hungry, convalescent stage; and it was decided that Brownie should take a hurried vacation before the dentist returned to work.

The problem was to find someone to take her place at the office to answer the telephone and make appointments. Every year there was a struggle to find a suitable dental assistant to serve as a summer replacement, but this year no one could be found at such short notice.

The Dental Wife Volunteers

No one? There was one possibility which both the dentist and his nurse completely overlooked. With great firmness, the dental wife stated that she would go to the office herself. The dentist no longer needed nursing, and she felt she could handle both the office and the home after a fashion.

Her confidence was certainly not shared by her husband and his assistant, for she had never before professed the slightest interest in dentistry, her husband's patients, or the mysteries of the appointment book. However, she was the last apple in the replacement barrel and everyone knew it.

Suddenly, the whole household was abruptly switched around, and the first morning of Brownie's vacation the dental wife rose with the dawn, prepared her husband's breakfast tray, snatched a bite herself, stacked the dishes, and went off to the office with a jaunty air of efficiency.

Orientation

When she first stepped inside the empty dental suite, her confidence completely left her. It was like walking into another world. She found herself tiptoeing as she went from one silent operating room to another, with their alien array of instruments and bottles, peering into the doorway, where the giant arm of the X-ray machine seemed to lunge toward her, and sniffing the strange smell of the darkroom.

Then the telephone rang, and she was plunged headlong into the office business, making appointments and answering questions. She forgot her strangeness as she met, via telephone, Mrs. Murphy, the mother of six, whose eldest daughter had four impacted wisdom teeth to be extracted before she started college a month hence.

She talked to Mr. Stein, whose tooth had been aching for days, and managed to re-route him successfully to another neighboring dentist. She answered innumerable calls from other dentists and patients concerned about her husband's health. The flood of warm human interest in his well-being reached out to embrace her across the impersonal wires of the telephone and did disturbing things to her lachrymal glands.

Shortly after eleven, she answered the telephone with a crisp, "This is Doctor Jones' office," and a quiet, amused voice replied: "This is Doctor Jones speaking. What does Mrs. Jones want for lunch?"

The Doctor as Chef

Amid much laughter, they discussed the menu, and when she reached home at noon the dentist, complete with kitchen apron, met her at the door. He was thin and pale, and a trifle shaky, but lunch was on the table and a very good lunch it was.

Of Mutual Benefit

The switch in roles was a beneficial experience for both of them. The dentist discovered some of the interruptions and problems a wife faces at home, and the wife learned in some very small measure a few of her husband's problems with his patients, and the complex mechanism of running a dental office.

When Brownie returned from her vacation, and the dentist went back to his office, the dental wife found herself a little reluctant to surrender her new responsibilities. She had become interested in Mrs. Murphy, Mr. Stein, and all the other patients for whom she had arranged appointments, and felt that she had gained immeasurably in understanding after her brief glimpse inside her husband's professional world.

ANGLES AND IMPRESSIONS

by Maurice J. Teitelbaum, D.D.S.

Dental Thisa and Data

When the students flock back to dental school next month the number of potential dentists in the country will reach an all-time high—nearly 12,000. There are now 42 dental colleges in the Nation and, according to the 1953 edition of the *American Dental Directory,* there are 91,638 U. S. dentists. Dentistry marches on! . . . According to population, there are fewer dentists in South Carolina (1 per 5,477) and Mississippi (1 per 4,557) than anywhere else in the country. The east coast area, including the District of Columbia, Maryland, New Jersey, New York, Pennsylvania and West Virginia, leads the Nation with one dentist for each 1,425 persons . . . The Periodontia Department of New York University College of Dentistry, which has been giving postgraduate courses in this subject since 1926, announces its full-time course in periodontia and oral medicine for one academic year, September 21, 1953, to May 21, 1954, leading to a certificate. Half-time, two-year courses and refresher courses are also given . . . Of 361 medical cooperatives groups surveyed, 88, or 24.5 per cent, had at least one practicing dentist in the group.

Inci-dentals

The magazine *Brewery Age* has joined the health publication *Prevention* in its fight against the fluoridation of water in what is referred to as "mass medication." . . . The latest statistics reveal once again that women are more regular visitors to the dental office than men. Which proves rather conclusively that a woman will never miss the opportunity to open her mouth . . . Here is a check list of average dental fees in the United States for 1943—just ten years ago. The cost of living has soared since then. Have your fees gone up accordingly?

Full mouth X-rays	$8.00	Full crowns	$15.00
Prophylaxis	2.50	Porcelain jackets	26.50
Extractions	2.00	Unit of bridgework	13.75
1 surface amalgam	2.25	2 surface amalgam	3.50
3 surface amalgam	5.00	2 surface inlay	12.00

Look for an all-out campaign by the confectionery and soft drink companies to show that eating sweets does not have a marked effect on the teeth. Reason for the campaign? There has been a drop in the consumption of candy and soda during the past year . . . Physicians in St. Petersburg, Florida, inaugurated a plan some months ago that bears watching for possible duplication by some civic-minded dentists. The physicians have been conducting a monthly public forum with short talks on various health topics, followed by a question-and-answer period. The "town hall on health" has received such wide support by the citizens of the town that at times overflow crowds necessitate a "double feature" the same evening. The material presented by the four or five physicians at each meeting is frank, simple, and devoid of any medical jargon or scientific terms, so that everyone can understand what is being said. No out-of-town speakers are invited; the entire program is conducted on a local level. The American Medical Association has not given the "forum" official sanction, but the idea is being watched with keen interest.

R FOR LIVING

Jay Rice Moody—Antique Auto Hobbiest

by Joseph George Strack

Dr. Moody

The president of the Veteran Motor Car Club of America, an organization of persons devoted to the rather unique hobby of collecting and restoring antique automobiles, is a dentist: Doctor Jay Rice Moody of Newport, R. I. To qualify as a member of the VMCCA one must have a genuine interest in old automobiles. Cars owned by members must be at least twenty-five years old to qualify in club competition. Doctor Moody has four: a 1908 Overland, the "Gentleman's Speedy Roadster"; a 1910 Cadillac, a four-passenger touring car with demi-tonneau; a 1917 Pierce-Arrow, a five-passenger touring car, a model once known as the "Road Locomotive"; and a 1907 Reo, a five-passenger, two-cylinder job with detachable tonneau.

The Moodys—father, mother, four children—had a wonderful time recently touring New England in the 1908 Overland. They have also made trips to Canada and to Williamsburg, Va., in the 1910 Cadillac. They joined the Glidden Tour (trips made by antique car owners) to Washington, D. C., and return last year—approximately 2,500 miles—in their 1917 Pierce-Arrow. Next year the whole Moody family will participate in the Glidden Tour to Detroit to help celebrate the fiftieth anniversary of the automobile in the United States.

How does one become interested in such a hobby as that of finding, collecting, restoring and operating old automobiles? Doctor Moody answers such questions with enthusiasm:

"Of course, if you like cars—like them a great deal—you are potentially an auto hobbyist. If you have a flair for automobile mechanics besides—you are almost a born auto hobbyist. But if you also have whatever it is that helps people to appreciate antiques, to like old things, to understand a culture of the past—why then you are eminently qualified to join the nearly 2,000 persons in the United States, Hawaii, and Canada who are members of the Veteran Motor Car Club of America.

"Frankly, I chose this hobby because I wanted an avocation that would keep my hands occupied —a requisite for avoiding 'nerves.' But, more than that, I sought a hobby that the whole family could enjoy as a family. I don't know of anything more important for wholesome family living than

The 1908 Overland "pre-Moody." Above, the same car "post-Moody."

The Overland had a fan in the flywheel.

a hobby that all members of the family can share together. The Moodys have found it in veteran motor cars—have found fun, relaxation, all the satisfactions one expects from a good hobby."

The Moodys find the old cars in barns, often forgotten there for decades. Such a "find" is as much an occasion for them as a mastodon bone discovery may be for an archaeologist. Fixing up such cars, so that they operate safely and efficiently and their body finishes are restored to their original condition, is a labor of love for Doctor Moody and the four children: William, fifteen; Jayne, twelve; Curtis, ten; and Stanson, seven. An ordinary restoration requires two to three years' time and costs two or three hundred dollars, depending upon the condition of the car and the thoroughness of the restoration effected—and provided, of course, that it is owner-restored.

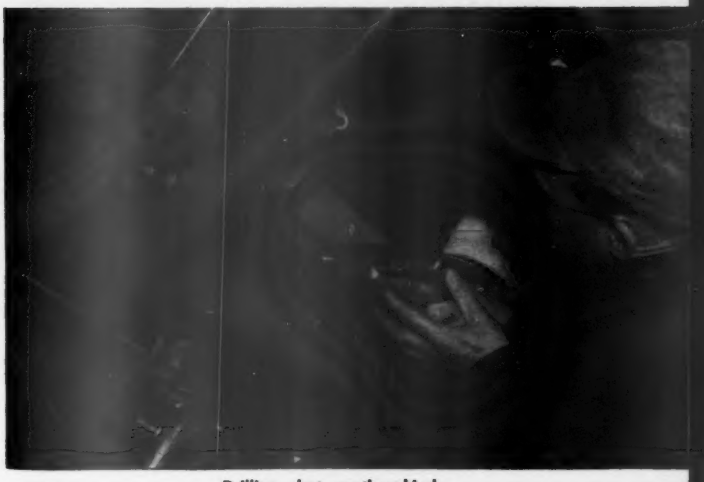
The 1907 Reo owned by the Moodys will not be restored until 1955. That year Stanson will be ten and will be old enough to learn how to work on an antique automobile, his father says.

Use Old Cars on Trips

Although the Moodys own a modern Chrysler car, they use the antique cars for many long trips. Last year Doctor and Mrs. Moody visited Mrs. Moody's parents, Doctor and Mrs. Arthur Baker of Westbrook, Me., driving over 800 miles there and back in the 1908 Overland. The car does between twenty-five and thirty miles per hour; averages twenty miles on a gallon of gasoline; and uses one quart of oil every 200 miles. Young Bill Moody did the entire engine restoration job himself.

Before going to Westbrook, the Moodys stopped off at Oakland, Me., to see Bill at the New England Music Camp. Dressed in dusters and wearing gog-

A gravity feed oiling system; enough for 800 miles.



Drilling—but another kind.

Stripped down, and ready for a complete restoration job.

The Moodys in Gay Nineties costumes at 1952 Glidden Tour Ball, Washington, D. C.

What the Moody's call the "family jewels."

gles, they were appropriately greeted at the camp with such dated ditties as "In My Merry Oldsmobile."

The Moodys have also made many extended trips in their 1917 Pierce-Arrow. Not to be outdone by the hot-rod crowd, they have named the car "Pi Phi," after the sorority of which Mrs. Moody—the former Doris Mae Baker of Westbrook, Me.—was a member while attending the University of Maine. Mrs. Moody says: "We had a sorority song with lyrics that advised girls to marry men who wear Arrow collars and drive Pierce-Arrow cars."

The Pierce-Arrow can do fifty miles an hour; it averages fourteen miles on a gallon of gasoline. The model is one of the heaviest in existence, weighing 5,700 pounds. The only car that is heavier is the present-day, seven-passenger Cadillac.

No Stuff-Shirts

Doctor Moody laughs when he says: "By the time our youngsters mature—what with fifty-year-old cars, dusters, goggles, the audible astonishment and gawking of bystanders, the hoots of low-flying hot-rodders on the highway—there won't be a streak of stuff-shirtedness in any one of them. They'll be as

A 1910 Cadillac before rehabilitation.

The same Cadillac after Moody magic.

natural as sunshine, as poised as a tree, and as relaxed as a sleeping kitten—God willing!"

He received his D.M.D. degree from Tufts College Dental School in 1935. He served his internship at Norfolk, Mass., State Prison as prison dentist. Subsequently he established his private practice in Newport, R. I. He is head of the Dental Clinic, Out Patient Department, Newport Hospital; instructor in oral hygiene at the Newport Hospital Training School for Nurses; and is widely known as an authority on dental economics, having given numerous clinics in practice management before state and regional dental associations. He recently served as a trustee of the Rhode Island Dental Society.

The Moody office staff. Front row: Mrs. Florence Garniss, secretary; Margaret Thompson, hygienist; Jane Gavin, secretary; Lorraine Ferreira, assistant. Back row: Mrs. Irene Merker, dental nurse; Dr. Moody; Peter Fallon, laboratory technician; and Dr. Thomas R. McSparren, associate.

The Moodys have fun on a family scale wherever possible.

The Moodys in their 1917 Pierce-Arrow.

In happy chorus the Moodys exclaim: "Everything on the road passes us!" To be able to say that in high good humor these days of jet speed and I'll-back-him-off-the-road neuroticism is a measure of the wholesome adjustment the Moodys have made to the fun of everyday living. It is no mere pun that their home at 59 Kay Street, Newport, is named "Merrymoods."

EXTRA CURRICULUM

Though dentists learn so many things
When they go to college,
There's one thing that they do not teach—
That is, to my knowledge:
It's how to let a patient know,
Despite their dental skill,
They think he'd also profit by
A spot of chlorophyll.

Ethel Willis Hewitt

Part III

Partial Denture Design

SCHOOLS OF THOUGHT

by Joseph Murray, D.D.S.

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Leading clinicians in the partial denture field are in agreement that proper design is the correct utilization and application of mechanical and biologic principles which will enable the supporting teeth and the more yielding soft tissues to accept the movement and stresses imposed upon them during mastication.

However, great controversy exists as to what constitutes correct design and adequate support for the free-end or distal extension type of appliance (involving tooth and ridge support).

How to utilize and equalize ridge support along with tooth support has been the burning issue.

As a result, three schools of thought have arisen, and their theories propounded as follows:

(1) Those who favor stress-breakers or resilient equalizers
(2) Those who advocate physiologic basing—through the use of an impression under pressure or by rebasing the denture under biting stress
(3) Those who support extensive stress distribution, to prevent trauma to teeth and ridges

Stress-breaking enthusiasts emphasize the non-resiliency of teeth in an apical direction, and point out that the resiliency of the periodontal membrane is not comparable to the greater resiliency and displaceability of the ridge mucosa. This group condemns the rigid connection of direct retainers to the base, and insists that some type of stress-breaker or stress equalizer be used.

Stress-broken cases require clasps or frictional attachments, some form of stress-breaker, minimum of tooth engagement and bases of ordinary anatomic form on the ridge surface.

Advantages of Stress-Breakers

Doctor V. L. Steffel lists the possible advantages of stress-breakers:

The resiliency of the stress-breaker added to that of the periodontal membrane makes the sum of the two comparable with the resiliency of the mucosa.

The elimination of tipping strain prevents bone resorption about the abutment teeth.

Intermittent pressure of the bases massages the mucosa, providing physiologic stimulation which results in thickening of the cortical layer of bone and soft tissue cell proliferation.

Trauma to the abutments is prevented because stresses are reduced.

Physiologic massage induces stimulation which minimizes bone resorption and rebasing.

Because of the relative passivity of the denture, mouth comfort is improved.

A balance between the stress-bearing duties of the abutment teeth and ridges is provided.

The Disadvantages

Here are the possible disadvantages of stress-breakers:

The appliance is fragile, difficult, complex and costly to construct.

Rapid resorption of bone and consequent settling will result if the stress-breaker is too weak or too movable.

The restoration is not stabilized against lateral thrusts.

Indirect retention is difficult because the prosthesis is movable.

Strangulation of tissues distal to the abutments with consequent periodontal disease is caused by some forms of equalizers.

Frequent rebasing of the appliance is necessary if bone resorption takes place.

The tongue and other lingual tissues are frequently pinched by resilient types of stress-breakers.

The restoration is often bulky and heavy.

In support of the broken stress principle can be found such eminent clinicians as Doctors D. M. Hollenback, A. Loos, J. H. Wilson and D. F. McGee.

Doctor Hollenback claims that a successful extension partial denture must be sufficiently retained so that it can function properly and will not be

easily displaced; and so that the stress of mastication is largely borne by the mucosa of the edentulous area, the abutment teeth acting only to hold the denture in position and functioning as a stop when the mucosa has been displaced almost to its limit.

He feels that precision attachments are the most ideal for partial dentures, but their use is particularly indicated in extension cases. In conjunction with the latter, some type of stress-breaker must be utilized so that the abutment teeth are not destroyed through abrasion, caries or trauma.

Distal Extension Stress-Breaker

Doctor H. E. S. Chayes developed a device known as the distal extension stress-breaker, which he used in conjunction with the Peeso split pin and tube to permit the abutment tooth to undergo its normal cycle of movement. Doctor E. V. McCollum conceived the ideas of combining the Chayes buccolingual attachment with the Chayes distal extension stress-breaker, to produce a very useful retaining device.

The distal extension stress-breaker can be modified to suit any condition that may arise. Doctor Hollenback further states that a satisfactory stress-breaker must allow sufficient movement for the mucosa to be replaced to the extent that it is able to assume nearly all the stress.

In adjusting the distal extension, just enough should be cut away from the top of the attachment so that most of the mucosal displacement occurs before the sleeve of the stress-breaker contacts the top of its arm.

According to Doctor Loos, as both the abutment teeth and the alveolar ridge have a certain capacity to compensate for overstress, the best solution is an even distribution of the burden of the partial denture, so that it is both tissue- and tooth-borne. Such a distribution is possible only by use of stress-breaking elements with strictly limited and controlled resilience. The alveolar ridge then receives its share of the load first, when the stress is on the verge of becoming harmful to the alveolar bone. The remainder of the stress is transmitted to the anchoring teeth.

Fundamentals of Stress-Breaking

Doctor Wilson states that since unit metal castings are often used, torque and the need for stress-breaking are real factors if orthodontic effects of a partial denture are to be eliminated. The basic fundamentals of stress-breaking are:

Balanced occlusion and smoothness of articulation in eccentric function

Occlusal rests of correct design

Rigidity of saddle connectors

Direct retainer designs of not too severe retention to correct survey of a gentle path of denture insertion

Full use of saddle areas in Class II sites

Discrimination in the buccolingual width of posterior teeth and a generally selective approach to occlusal loading

Attention to settling of tissue-borne saddles by rebasing

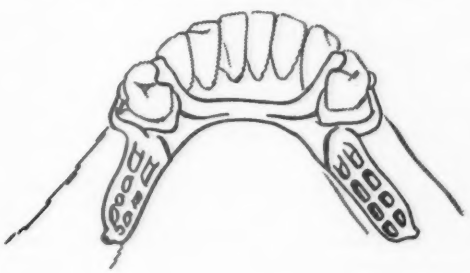
Doctor Wilson states that when these basic concepts are not fulfilled, specific stress-breaking is nullified and becomes an incongruity.

Doctor McGee is of the opinion that all combination supported partial dentures, especially in the lower jaw, should be provided with some form of stress-breaker. The latter should be part of, or attached to, a good retainer that does not require constant adjustment; allow desired vertical movement of the saddle toward the soft tissue of the ridge (and this movement should be adjustable if possible), and prevent movement in the opposite direction (displacement away from the ridge).

Furthermore, he states that use of indirect retention as part of the design usually enables the stress-breaker to meet this requirement.

Kinds of Stress-Breakers

The simplest and most commonly used stress-breakers are made of wrought wire or certain clasps of Roach design. Here the movement is attained from the flexibility of the metal of the retainers.



They must be provided with stops or rests so formed as to permit a certain amount of slippage. Breaking the stress by means of a split lingual bar is possible, but each section of the bar must be rigid enough to resist the twisting action.

The standard types of stress-breakers produce a hinge-like action near the abutment tooth, allowing most of the downward movement of the saddle to occur at the distal end.

By placing the rotation point at the end of the distal extension, a more even movement is produced over the entire bearing area, resulting in greater comfort for the patient.

The second group favors a few relatively mobile

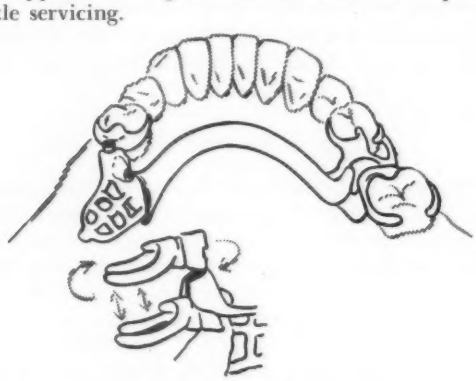
direct retainers, to be used for limited retention only. Functional displacement of the mucosa must be obtained either in the impression making by pressurized recording, or by means of a pressure rebase which will record the functional form of the tissues as contrasted with the static anatomic form.

Requirements for physiologically based cases are that the tissue side of the bases presents functional form; artificial teeth make slightly premature contact; occlusal rests or attachments are just unseated until mucosa is displaced to functional form; direct retainers are freely movable, and there is a minimum of direct retainers for retention only.

Advantages of Physiologic Basing

Advantages of physiologic or functional basing are:

Due to the simplicity of design and construction, the appliance is light, small in bulk and requires little servicing.



Because of cell proliferation caused by physiologic massage, the necessity for rebasing is eliminated.

The mucosa and ridge actually share the burden of mastication.

Since the tissues are physiologically stimulated or massaged, normal function and repair results.

The abutment teeth are preserved because of the lightness of clasp contact or freely movable frictional attachments.

The Disadvantages

The disadvantages, on the other hand, are:

Free-moving and minimum number of direct retainers interfere with the stability of the denture which is especially subject to lateral thrusts.

The over-compression of tissue necessary to secure functional displacement will result in rapid resorption of the mucosa and the need for rebasing in many instances.

The remaining teeth do not share in stabilizing the denture and resisting stress.

Because the denture moves vertically, indirect retention is inefficient.

A feeling of insecurity results from movement of the appliance.

High occlusal contacts cause incipient discomfort to the denture-wearer.

As with the sponsors of the stress-breaker, equally prominent authorities favor the restoration, reproducing functional form.

Harmonizing Occlusal Relations

Doctors O. C. Applegate and Roland O. Nissle feel that next to the reduction of the occlusal table during increased muscular activity and biting force, harmonizing the occlusal relations is the step in partial denture prosthesis where most can be accomplished toward bringing the stress loads within the range of the patient's tissue tolerance. Since stresses generated during sleep (unconscious gritting of teeth) can be more destructive than masticatory strain, the authors describe a recently developed technic, so applicable to the partial denture, in which the patient is allowed to wear a special wax occlusal rim during sleep, which reduces to a minimum the stresses generated.

The appliance will have been finished, except for addition of the teeth, so that this rim is supported securely. After being worn by the patient (except when eating) an occlusal pattern of paths is produced which will record exact occlusal harmony in all jaw positions including the abnormal, eccentric ones assumed during sleep. The adjustment of porcelain or acrylic teeth to a stone template made from this wax pattern will result in the complete elimination of malocclusal stress, is the author's claim.

Doctor W. I. McNeil states that tissue-borne cases should be taken under pressure, in most cases.

As for Doctor L. D. Jordon, he insists that although an accurate impression of the teeth is necessary at all times, soft tissues that comprise any part of the denture foundation should be recorded in a state of functional displacement.

Like Doctor E. Kennedy, he feels that rebasing should be done either during impression making or after the denture is completed, if compression of the mucosa is not obtained with the original impression.

The third school of thought, with equally prominent representation, favors broad stress distribution. Prosthetic specialists like Doctors C. H. Schuyler, M. M. DeVan, A. R. Frechette, and Steffel recommend multiple tooth engagement by clasps and extra rests, chiefly to prevent lateral movements.

A distributed stress case requires cast or rigid wrought direct retainers (internal or external); positive lug seats; all rigid, nonflexible framework; multiple rests and direct retainers; indirect retain-

ers to add stability when a practicable, and well adapted, broad coverage bases.

Doctor Schuyler states: In the case of the partial denture, the lateral forces applied to the abutment teeth are proportionately reduced as the number of teeth used to carry the appliance is increased.

It has often been said that two clasps are sufficient for any restoration. This is true if retention is considered the only function of a clasp; but why should the burden of lateral forces in function be limited to only two teeth, if others are available to share this burden?

For example, if four teeth were available for a given duty, which, if properly planned, would not overtax them, it would be poor judgement to overwork two teeth, expecting to use the remaining teeth after the first two are lost.

Regarding stress-breakers, Doctor Schuyler feels that they are seldom indicated, and those which permit all the occlusal stress to be placed upon the saddle-supporting tissue, or which permit excessive movement of the denture base, should never be used.

Doctor DeVan, too, advocates the utilization of added support: Where a natural denture has lost more than half of its abutments any normal teeth remaining may be employed as auxiliary abutments by placing occlusal rests on their stoned-down marginal ridges.

And Doctor Steffel adds that the denture must have definite tooth support by multiple clasps and occlusal rests. The greater the number of rests, the better is the stress distribution.

Finally, Doctor Frechette upholds the school, by saying that vertical forces must be positively controlled and countered by combined tooth and mucosa support through the use of multiple rests and adequate saddles. Stress should be delivered to as many teeth as is practicable by the occlusal rests of clasps and by additional rests placed for this purpose.

Broad Stress Distribution

Advantages of broad stress distribution are as follows:

Functional stresses are limited and distributed, protective influence is exerted, and overstimulation is prevented.

Teeth are immobilized, which allows for tissue regeneration.

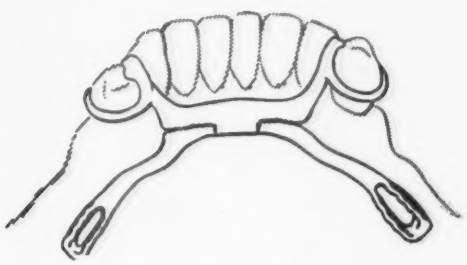
No stress-supporting element is overstimulated or traumatized, which increases the life of the denture and eliminates rebasing.

Restorations are well stabilized against teeth to resist lateral thrusts, and cases usually provide excellent indirect retention.

The disadvantages of this design are that multiple contacts and additional supports sometimes irritate the tongue and make the restoration more conducive to caries.

In summarizing, it is appropriate to quote from Doctor Steffel:

"When and where to best apply the design of each school of thought can well constitute sufficient material for additional extensive research. Despite the fact that there are numerous superb materials and technics for the fabrication of partial dentures, and many different possible designs for a given case, nothing can supersede good judgment, coupled with a knowledge of basic principles."



NEXT MONTH: PART IV

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No 'heel of Achilles' for this youngster of seventy. He's done away with a major evil of an aging population—aching feet.

How To Stay On Your Feet After Forty

by Benjamin Kauth, Pod. Dr., Director
American Foot Care Institute, Inc.

Walking and running barefoot on a springy lawn is a fine summer tonic for hot and tired feet.

Millions of Americans are walking into middle age every year on feet that are just about ready to break down under the job. With one-third of our working population in the over-forty category, the Nation's aching feet are becoming a major problem.

Neglect Is Cause

Recent surveys show that the chief cause of our foot problems is not disease—but neglect, particularly when it comes to the shoes we wear. Shoes that fit badly, are poorly constructed or contain inferior or harmful materials, are without doubt the greatest single cause of foot troubles. But, most often, the fault does not lie with the manufacturer of the shoes, but with the purchaser, who fails to obtain the shoe best suited to his feet.

Ailments resulting from mistreated feet are not confined to the feet alone, as dentists know only too well. Headaches, back pains, aching shoulders, varicose veins, and a multitude of other diseases can be caused by feet that are not functioning properly and consequently throw the entire body alignment out of kilter.

Given a minimum of care, our feet will go about their daily jobs without complaint—will do a remarkably efficient job of carrying us around almost indefinitely.

How to Avoid Trouble

When you buy your next pair of shoes, doctor, make certain that they fit properly. They should be snug around the heel, at least one-half inch longer than your foot and wide enough to permit the leather above the ball of the foot to be pinched slightly. Be sure they are comfortable when you try them on. Don't depend on the shoes to "break in." Although leather will mold itself to the contours of the foot if the shoe is properly fitted, poorly fitted shoes will twist and constrict the foot.

The ideal shoe for both men and women is a laced oxford with leather upper and leather sole. Note to dental hygienists and dental assistants: Since most women, no matter what their age, are not going to wear oxfords for dress-up wear, we can only suggest, ladies, that you keep your high heels for special occasions—and climb down off them as soon as possible!

Ten Rules of Foot Health

The American Foot Care Institute has developed a set of foot health rules which are being used widely in industry and government agencies. Postmen, who walk sixteen miles or more a day, have found that observance of these rules help to keep their chief means of support in working condition. Although most of us do not cover that much ground daily, these rules—if followed—will tend to keep you on your feet:

1. WASH FREQUENTLY! Bathe your feet once or even twice a day, dry them thoroughly, and use foot powder afterward.
2. CHANGE OFTEN! Never wear the same shoes two days in succession, and change socks or stockings once or twice a day.
3. TRIM RIGHT! Cut your toenails straight across and not shorter than the flesh.
4. WEAR RIGHT! Wear all-leather shoes, both soles and uppers, and pick the right shoe for the right occasion.
5. FIT RIGHT! Be sure you have the proper size of shoe, the proper last of shoe, and the proper size of sock or stocking (half-inch longer than longest toe).
6. EXERCISE! Limber up your feet at intervals—they have muscles, too, remember. Wiggle your toes!
7. KEEP DRY! Don't needlessly get your feet wet, and don't let them stay wet from perspiration.
8. WALK RIGHT! Cultivate good posture, and give your feet proper support with all-leather shoes.
9. DON'T NEGLECT! Examine your feet frequently. This is especially important if you suffer from circulatory or chronic ailments.
10. TAKE CARE! Don't be a "bathroom surgeon." If your feet need attention, consult a qualified podiatrist or chiropodist.